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1. The CLUSNET project

Clusters have become a focal point of new policy initiatives in recent years in Europe. Mobilising the potential of clusters is now seen as central to regional, innovation and industry policy; at regional, national and EU levels. Clusters – regional groups of inter-connected companies and associated institutions in particular industrial fields – are important because they allow companies to be more innovative than they would be in isolation. Thus, an enhanced understanding of cluster dynamics is key to improve regional growth strategies, innovation strategies and to transform industrial policy across Europe.

The CLUSNET project has been a three-year project (2009-2011) working towards three main objectives:

1. Improving the effectiveness of cluster support policies in larger European city-regions

2. Exchanging best practice from cluster cases across the city regions

3. Facilitating trans-national networks between cluster organisations and public officials working with cluster policy across partner cities

CLUSNET has been financed through the Interregional Cooperation Programme INTERREG IVC, financed by the European Union's Regional Development Fund, which has been set up to promote cooperation between Regions of Europe , and furthermore to share experience and good practice in the areas of innovation, the knowledge economy, the environment and risk prevention.

CLUSNET is based on a partnership consisting of:

- Lyon (Lead Partner)
- Barcelona
- Budapest
- Dortmund
- Eindhoven
- Gothenburg
- Helsinki
- Leipzig
- Manchester
- Munich

Cluster policy support has become an important element in economic development efforts of city-regions. However, the nature and impact of such efforts vary enormously, making it difficult for decision makers to find the right combination of tools that most effectively support cluster. City-regions are therefore searching for greater knowledge in this policy field. Hence, the objective of the CLUSNET project is to improve the effectiveness of cluster support policies in larger European city-regions.

Through the analysis of cluster programmes and organised clusters in the involved cities, the project has aimed to produce operational policy recommendations targeting each partner city on how to strengthen their efforts in cluster policy support. The project has also facilitated linkages between clusters from partner cities.

Since early 2009, the CLUSNET project has organised policy workshops in partner cities with the participation of numerous policy makers and clusters managers from all over Europe. During each workshop, in-depth policy analysis of existing cluster policies has been conducted with the objective to produce concrete suggestions for policy improvements. During CLUSNET workshops, networking activities and B2B meetings have furthermore been organised for cluster managers from partner cities in order to stimulated cross-border collaborations. In parallel, CLUSNET has enabled policy makers to participate in thematic in-site visits allowing them to engage in more direct, bilateral policy exchanges.

As a result of these activities, policy makers have gained an even better understanding of the complexity of successful cluster policy support, while at the same time gaining insight into the challenges facing European clusters today. As a platform for policy exchanges, CLUSNET has contributed to the design of even more effective clusters support policies in European cities. The lessons learned and policy recommendations born out of this work, are to be found in this report. Together with the successful inter-cluster contacts generated by the CLUSNET project, these policy recommendations constitute the core result of three years of activities.

2. Innovation and clusters

Some firms are envied - they are innovative. Household names like Apple, Google, Toyota, Samsung and Twitter are listed among the most innovative firms in the world (Business Week top-100 Innovators). Innovative firms are both large and small, and innovative firms turn out a stream of new products, services, processes and smart business models. We argue that the common trait of innovative firms is not that they are staffed with particular people, or that their organisations are geared towards creativity and commercialisation. There is maybe some element of truth in this, but the important common denominator is that innovative firms tend to have their home base in particular environments – in dynamic clusters. It is obvious that there are more innovative clusters in the developed world, but when comparing rich countries, or even regions within advanced countries, they differ enormously in their overall capacity for innovation and in which areas of technology and business innovation occurs.

It is well understood that innovation is distinct from invention. Invention is the creation of something new, often with a technical meaning. Inventions can be patented. Innovation is also about new things; new products, production processes, services and novel business models. But this is only the first side of the coin. The other side is about bringing the new product or service into use and commercial value. The height of an innovation is not about how big the idea is, but how widely it is coming into use. For example, the introduction of Email became an enormous innovation, even if the technology was more mundane. So there are two sides to the coin; developing a new idea, product or service, and bringing it to the market. As we will see later, clusters are critical to the second half.

We can distinguish between two main sources of innovation: the scientific community and entrepreneurs or entrepreneurial firms, both large and small. The world of science and research generates new knowledge, ideas and concepts. Inventions and scientific discovery has led to numerous start-ups. In 1972 a Swedish professor at the Karolinska Institute in Stockholm, Lars Leksell, and his two sons, started up a company called Elekta around an inventive idea of using gamma radiation to treat brain tumors. After 20 years of clinical trials, the so called “gamma knife” had been born and was brought to the marketplace.

Medical technology, biotechnology and pharmaceutical firms emerge in close vicinity to leading universities in cities. Either they have been attracted to the location, or they were once a product of research transferred into commercial use as in the case of Elekta. When one of the world's leading Pharmaceutical companies – Novartis – announced that they would move core operations from Switzerland to Cambridge, Massachusetts, it was an act of shifting the research home base from one regional context to another, from one cluster to another.

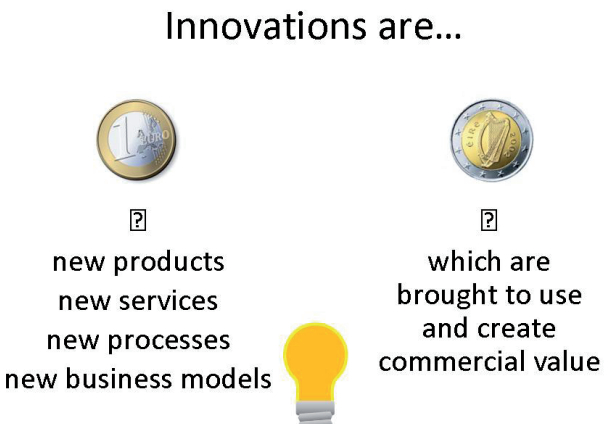

Figure 1. Two aspects of innovation

As we will see in the next Chapter, connections between academia and business are crucial for innovation in many fields. Since city regions are home to universities and laboratories, we see an overrepresentation of innovation seeds from science in such regions. But there is another side to the seeds of innovation which is about acts of entrepreneurship. The classical Schumpeterian entrepreneur is a person that manages to develop new products and ideas that are brought to the market place, often with catastrophic consequences for established firms based on an old technology or business model.

According to Schumpeter society develops through a process of creative destruction, where the novelty takes place at the detriment of established institutions and technologies. About a century ago the automobile entered the marketplace, which would fundamentally transform our society.

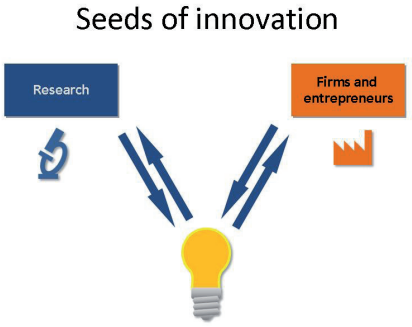

Figure 2. Two seeds of innovation

In Sweden there were two young men, Assar Gabrielsson trained at the Stockholm School of Economics, and his friend Gustaf Larson, trained at the Royal Institute of Technology, working for the bearing company SKF. They had noticed the quickly growing industry, and in the early 1920s they agreed that they should start their own company, and take up production of cars. The small firm, set up in Gothenburg and named Volvo, developed within a cluster of manufacturers of engines (e.g. Pentaverken), gearboxes (e.g. Köpings Mekaniska Verkstad), bearings (e.g. SKF from which the company was spun off), metal casting (e.g. Bofors) and many other key technologies and industries. Innovations were brought in from the US and adapted to Swedish circumstances. The first car that came out of the assembly hall in 1927 was quite a modest product. However, Volvo later developed a long series of innovations, particularly related to safety and the environment.

Let us shift to another start up. On March 31, 2006 the Twitter Beta version was launched on Jack´s birthday. Three guys in Silicon Valley - Jack Dorsey, Biz Stone, and Evan Williams – were about to launch a new product that would take off at an enormous speed. Twitter would not just create a new business but also help Barack Obama into the White House. Biz and Evan had left Google a couple of years earlier and had joined Jack at Odeo. After twisting the idea many times, the code was developed in a matter of weeks. Volvo and Twitter are two examples of innovations based on entrepreneurship, with little or no connection to the world of science. But both are important examples of new firm formation within clusters. And both Volvo and Twitter were in a sense not new ideas. The first Volvo car and the assembly line concept were a mere copy from the US, and the Twitter concept already existed in Finland, developed by the small firm Jaiko.

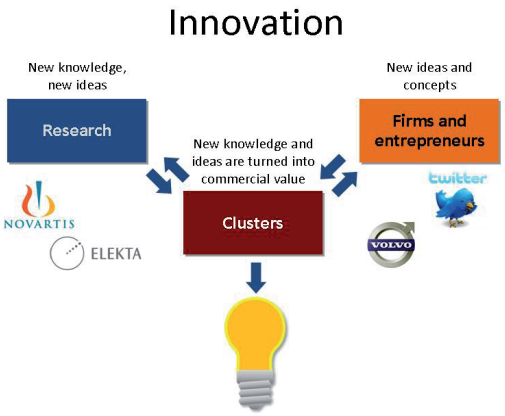

Figure 3. Innovation and clusters